

1. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{4x + 3}{4} - \frac{4x - 7}{3} = \frac{6x - 7}{6}$$

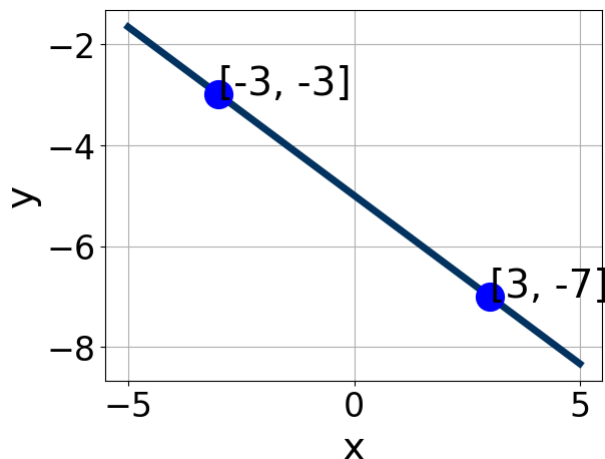
- A.  $x \in [-0.78, -0.3]$
- B.  $x \in [3.1, 3.85]$
- C.  $x \in [12.36, 13.67]$
- D.  $x \in [0, 1.28]$
- E. There are no real solutions.

2. Find the equation of the line described below. Write the linear equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Perpendicular to  $9x + 7y = 7$  and passing through the point  $(-8, -5)$ .

- A.  $m \in [0.39, 1.13]$   $b \in [-1.5, 0.4]$
- B.  $m \in [-1.48, -0.33]$   $b \in [-14.6, -10.5]$
- C.  $m \in [0.39, 1.13]$   $b \in [0.3, 2]$
- D.  $m \in [0.39, 1.13]$   $b \in [2.4, 3.9]$
- E.  $m \in [0.87, 1.62]$   $b \in [0.3, 2]$

3. Write the equation of the line in the graph below in Standard Form  $Ax + By = C$ . Then, choose the intervals that contain  $A$ ,  $B$ , and  $C$ .



- A.  $A \in [0.4, 0.9]$ ,  $B \in [-1.1, -0.84]$ , and  $C \in [5, 6]$
- B.  $A \in [0.8, 2.4]$ ,  $B \in [-3.16, -2.12]$ , and  $C \in [9, 17]$
- C.  $A \in [0.8, 2.4]$ ,  $B \in [1.85, 3.9]$ , and  $C \in [-17, -8]$
- D.  $A \in [-2.2, -1.2]$ ,  $B \in [-3.16, -2.12]$ , and  $C \in [9, 17]$
- E.  $A \in [0.4, 0.9]$ ,  $B \in [-0.47, 1.93]$ , and  $C \in [-8, 1]$

4. First, find the equation of the line containing the two points below. Then, write the equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

$(-2, -5)$  and  $(6, 9)$

- A.  $m \in [0.75, 3.75]$   $b \in [-0.24, 1.69]$
- B.  $m \in [0.75, 3.75]$   $b \in [-3.9, -2.15]$
- C.  $m \in [-7.75, -0.75]$   $b \in [19.05, 20.67]$
- D.  $m \in [0.75, 3.75]$   $b \in [2.13, 4.37]$
- E.  $m \in [0.75, 3.75]$   $b \in [-1.63, -0.94]$

5. Solve the equation below. Then, choose the interval that contains the solution.

$$-2(-13x - 11) = -14(-5x - 18)$$

- A.  $x \in [-6, -4.9]$
- B.  $x \in [-4, -2.6]$
- C.  $x \in [-8, -6]$
- D.  $x \in [6, 6.9]$
- E. There are no real solutions.

6. First, find the equation of the line containing the two points below. Then, write the equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

$$(7, -9) \text{ and } (-7, -11)$$

- A.  $m \in [-1.06, -0.12]$   $b \in [-14, -10.2]$
- B.  $m \in [0.11, 0.46]$   $b \in [8.9, 10.1]$
- C.  $m \in [0.11, 0.46]$   $b \in [-10.3, -8.9]$
- D.  $m \in [0.11, 0.46]$   $b \in [-16.5, -15.2]$
- E.  $m \in [0.11, 0.46]$   $b \in [-6, -3.8]$

7. Solve the linear equation below. Then, choose the interval that contains the solution.

$$\frac{5x + 6}{7} - \frac{6x + 9}{4} = \frac{-9x + 9}{8}$$

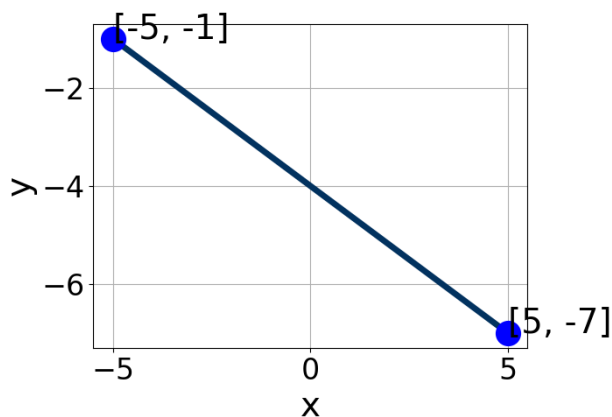
- A.  $x \in [32.37, 36.37]$
- B.  $x \in [-0.69, 2.31]$
- C.  $x \in [-7.84, -4.84]$
- D.  $x \in [6.42, 9.42]$
- E. There are no real solutions.

8. Find the equation of the line described below. Write the linear equation in the form  $y = mx + b$  and choose the intervals that contain  $m$  and  $b$ .

Parallel to  $3x + 7y = 10$  and passing through the point  $(-2, 4)$ .

- A.  $m \in [-0.55, -0.28]$   $b \in [5.6, 6.9]$
- B.  $m \in [0.05, 0.95]$   $b \in [4, 5.3]$
- C.  $m \in [-0.55, -0.28]$   $b \in [-3.3, -1.6]$
- D.  $m \in [-0.55, -0.28]$   $b \in [1.3, 4.7]$
- E.  $m \in [-2.72, -2.15]$   $b \in [1.3, 4.7]$

9. Write the equation of the line in the graph below in Standard Form  $Ax + By = C$ . Then, choose the intervals that contain  $A$ ,  $B$ , and  $C$ .



- A.  $A \in [-3.54, -2.69]$ ,  $B \in [-5.8, -2.9]$ , and  $C \in [18, 23]$
- B.  $A \in [2.92, 3.89]$ ,  $B \in [-5.8, -2.9]$ , and  $C \in [18, 23]$
- C.  $A \in [0.48, 1.46]$ ,  $B \in [-3.5, -0.2]$ , and  $C \in [2, 5]$
- D.  $A \in [0.48, 1.46]$ ,  $B \in [-0.1, 4.1]$ , and  $C \in [-4, -2]$
- E.  $A \in [2.92, 3.89]$ ,  $B \in [2.4, 6.8]$ , and  $C \in [-20, -15]$

10. Solve the equation below. Then, choose the interval that contains the solution.

$$-19(6x - 13) = -17(8x - 18)$$

- A.  $x \in [25.07, 25.17]$
  - B.  $x \in [-25.73, -24.72]$
  - C.  $x \in [2.45, 2.86]$
  - D.  $x \in [1.77, 2.63]$
  - E. There are no real solutions.
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